CLAIMS

What is claimed is:

1. A method for resolving the most probable digital fingerprint from a circuit, the circuit outputting a digital fingerprint comprising a series of bits, the method comprising the steps of

(a) polling the circuit for a digital fingerprint;

(b) recording the digital fingerprint;

(c) repeating steps (a) and (b) a desired number of times; and,

(d) calculating the most probable digital fingerprint from the values yielded in steps (a) - (c).

2. The method of claim 1 further comprising the step of

(e) storing the most probable digital fingerprint.

3. The method of claim 1 further comprising the step of

(e) calculating the stability value of at least one bit in said digital fingerprint.

4. The method of claim 3 further comprising the step of

(f) storing the most probable digital fingerprint in association with the stability value calculated in step (e).

5. The method of claim 1, wherein the digital fingerprint comprises at least two sections, each section comprising a series of bits, and wherein the method further comprises the steps of

(e) calculating the stability value of each bit in said digital fingerprint;

(f) for each section, storing the stability value of the least stable bit in each section in association with a section identifier and the most probable digital fingerprint calculated in step (d).

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6. An apparatus providing a digital fingerprint comprising

a digital fingerprint circuit, said digital fingerprint circuit outputting a digital fingerprint comprising a plurality of bits;

a control circuit, said control circuit operably connected to the digital fingerprint circuit and programmed to iteratively read the digital fingerprint a predetermined number of times; and,

wherein the control circuit calculates the most probable digital fingerprint based on the iterative reads of the digital fingerprint circuit.

7. The apparatus of claim 6 further comprising

a memory operably connected to the control circuit;

wherein the control circuit stores the most probable digital fingerprint in the memory.
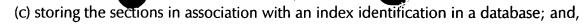

8. The apparatus of claim 6 wherein the control circuit calculates a stability value for at least one bit of the digital fingerprint based on the iterative reads of the digital fingerprint circuit.

9. The apparatus of claim 6 wherein the digital fingerprint comprises a plurality of sections, each of the sections comprising a plurality of bits;

wherein the control circuit calculates a stability value for each bit of the digital fingerprint; and,

wherein, for each section of the digital fingerprint, the control circuit stores in the memory the stability value of the least stable bit.

10. The apparatus of claim 9 further comprising means for transmitting the digital fingerprint and the stability values stored in the memory.

11. A method for resolving an identification, said method comprising the steps of

(a) receiving a digital fingerprint;

(b) dividing the digital fingerprint into at least two sections, the sections comprising a series of bits;

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(c) storing the sections in association with an index identification in a database; and,

(d) repeating steps (a) - (c) a desired number of times.

12. The method of claim 11 wherein said storing step (c) comprises the steps of

(c1) storing each section in a separate table in association with the index identification.

13. The method of claim 12 wherein separate database servers support each table.

14. The method of claim 11 further comprising the steps of

(d) receiving a digital fingerprint;

(e) dividing the digital fingerprint into at least two sections, said sections comprising a series of bits;

(f) scanning the database for sections stored in step (c) that match the sections of step (e);

(g) selecting the index identification associated with a statistically sufficient number of matching sections.

15. A method for identifying a digital fingerprint from a database including a population of fingerprints, the method comprising the steps of

(a) receiving a digital fingerprint;

(b) scanning for sections of the fingerprints stored in the database that match corresponding sections of the fingerprint received in step (a);

(c) selecting the fingerprint stored in the database associated with a statistically sufficient number of matching sections.

16. The method of claim 15 wherein the database comprises at least two section tables each of which store a separate section of the fingerprints in association with a corresponding index identification; and wherein the scanning step (b) comprises scanning the section tables with corresponding sections of the digital fingerprint received in step (a).

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17. The method of claim 16 wherein separate database servers support each section table.

18. The method of claim 5 further comprising the step of

    (g) transmitting the most probable digital fingerprint calculated in step (d), and the section identifiers and corresponding stability values stored in step (f).

19. The method of claim 5 further comprising the step of

    (g) transmitting at least two section identifiers and corresponding sections of the most probable digital fingerprint, the sections having the highest stability values calculated in step (e).

20. The method of claim 19 wherein the number of sections transmitted in step (g) is statistically sufficient to find a matching digital fingerprint.

21. The method of claim 11, 12, or 13 further comprising the steps of

    (e) receiving a digital fingerprint, the digital fingerprint comprising at least two sections, wherein the sections comprise a series of bits;

    (f) receiving section identifiers and corresponding stability values for each section of the digital fingerprint;

    (g) using the sections having the highest stability values, scanning the database to locate matching sections; and,

    (h) selecting the index identification associated with a statistically sufficient number of matching sections.

22. The method of claim 21 further comprising the steps of

    (i) if no index identification corresponds to a statistically sufficient number of matching sections, scanning the database for all sections stored in step (c) that match the sections received in step (e); and,

    (j) selecting the index identification associated with a statistically sufficient number of matching sections.

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23. A method for identifying a digital fingerprint from a database including a population of fingerprints, the method comprising the steps of

(a) receiving a digital fingerprint, the digital fingerprint comprising at least two sections, wherein the sections comprise a series of bits;

(b) receiving section identifiers and corresponding stability values for each section of the digital fingerprint;

(c) using the sections having the highest stability values, scanning the database to locate matching sections of the fingerprints stored therein; and,

(d) selecting the fingerprint in the database associated with a statistically sufficient number of matching sections.

24. The method of claim 11, 12, or 13 further comprising the steps of

(e) receiving at least two section identifiers and corresponding sections of a digital fingerprint, said sections comprising a series of bits;

(f) scanning the database to find sections stored in step (c) that match sections received in step (e); and,

(g) selecting the index identification associated with a statistically sufficient number of matching sections.

25. A method for identifying a digital fingerprint from a database including a population of fingerprints, the method comprising the steps of

(a) receiving at least two section identifiers and corresponding sections of a digital fingerprint, said sections comprising a series of bits;

(b) scanning the database to find sections of the stored fingerprints corresponding to the section identifiers received in step (a) that match the sections received in step (a); and,

(c) selecting the fingerprint associated with a statistically sufficient number of matching sections.

26. The method of claim 25 wherein the database comprises at least two section tables each of which store a separate section of the fingerprints in association with a corresponding

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index identification; and wherein the scanning step (b) comprises scanning the section tables with corresponding sections of the digital fingerprint received in step (a).

27. The method of claim 26 wherein separate database servers support each section table.

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28. An apparatus for identifying a digital fingerprint comprising

a fingerprint section database, the database including digital fingerprints comprising a series of sections stored in association with an index identification;

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a server operably coupled to the fingerprint section database,

wherein the server receives a digital fingerprint and scans the fingerprint section database for a fingerprint associated with a statistically sufficient number of sections that match corresponding sections of the received digital fingerprint.

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29. The apparatus of claim 28 wherein the database comprises at least two section tables each of which store a separate section of the fingerprints in association with a corresponding index identification.

30. The apparatus of claim 29 wherein separate database servers support each section

20 table.

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